

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application;

Claim 1. (Currently Amended) A receiving apparatus, comprising:

demodulation means for demodulating a reception signal to a signal on a real axis and a signal on an imaginary axis;

C/N carrier-to-noise (C/N) ratio calculation means for calculating a C/N ratio with the amplitudes in an amplitude direction of signal points of the demodulation reception signal demodulated by said demodulation means and a C/N ratio with the amplitudes in a phase direction of the signal points of the demodulation reception signal demodulated by said demodulation means;

phase noise detection means for detecting phase noise based on the basis of the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction; and

indication means for indicating the C/N ratios calculated by said C/N ratio calculation means and the phase noise detected by said phase noise detection means.

Claim 2. (Currently Amended) The receiving apparatus

as set forth in claim 1,

wherein said demodulation means has comprises phase compensation means for compensating a phase with an external compensation signal, and

wherein when the phase noise takes place, said phase compensation means compensates the phase.

Claim 3. (Currently Amended) The receiving apparatus as set forth in claim 1,

wherein when the phase noise calculated detected based on the basis of the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction is equal to or larger than a predetermine value, said indication means indicates an alarm.

Claim 4. (Currently Amended) The receiving apparatus as set forth in claim 1,

wherein said indication means indicates the phase noise calculated detected based on the basis of the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction as a numeric value.

Claim 5. (Currently Amended) A C/N carrier-to-noise

(C/N) ratio indication method for a receiving apparatus, the method comprising the steps of:

demodulating a reception signal to a signal on a real axis and a signal on an imaginary axis;

calculating a C/N ratio with the amplitudes in an amplitude direction of signal points of the demodulation reception signal demodulated by said demodulation means and a C/N ratio with the amplitudes in a phase direction of the signal points of the demodulation reception signal demodulated by said demodulation means;

determining whether phase noise takes place based on the basis of the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction; and

indicating the C/N ratios calculated by said C/N ratio calculation means and the phase noise detected by said phase noise detection means determined in said step of determining.

Claim 6. (Currently Amended) The C/N ratio indication apparatus method for the a receiving apparatus as set forth in claim 5,

wherein when the phase noise calculated determined based on the basis of the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio

calculated with the amplitudes in the phase direction is equal to or larger than a predetermine value, said indication means indicates an alarm.

Claim 7. (Currently Amended) The C/N ratio indication apparatus method for the a receiving apparatus as set forth in claim 5,

wherein said indication means indicates the phase noise calculated determined based on the basis of the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction as a numeric value.